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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13 March 2008_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-25_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-25_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _28 January 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 3-13-2008 have been fully considered but they are not

persuasive.

Applicant argues that Horvitz (US 6,618,716) is a 'many to one' system, which is in

contrast to their 'one to many' system. The examiner respectfully disagrees with applicant's

characterization of Horvitz. Horvitz is also a 'one to many' system as clearly described in the

specification, see below.

> *In one embodiment, this module determines the manner by which the user is alerted--for example, in an audio or visual manner, or on a mobile device such as a cell phone or a pager.* **(Column 2, lines 62-65)**

Also,

> *In another embodiment of the invention, transmission costs are also included in NEVA, such that the equation is changed from*
>
>   *NEVA=EVTA-ECA*
>
>   *to*
>
>   *NEVA=EVTA-ECA-TC*
>
> *where TC is the transmission cost associated with the alert (e.g., the cost of the page or the cell phone cost). The influence of calendar events on ECA for the case of a computer relaying a message to a cell phone is quite salient. That is, the online calendar can give the system an idea for how bad an interruption would be via a mobile device such as a cell phone or a pager--that is how big the ECA would be per the importance of the current meeting that the user is attending--and perhaps wait until the ECA goes down, e.g., when the meeting ends. Also, the system in one embodiment checks to see if the user is around or not at the desktop system before making a decision that the only way to reach the user is to "render" the notification via the cell phone.* **(Column 13, lines 25-46).**

Horvitz clearly teaches a 'one to many' system, wherein the one peripheral information

notification and alerts module (column 2, lines 47-65) can alert the user by a variety of devices

such as the cell phone, pager or desktop in the cited passages above.

With respect to applicant's argument that there is no user preference for contacting the

user, Horvitz teaches that "*alert management is centralized and is guided by policies derived*

from knowledge about costs or preferences" (column 3, lines 2-4). The user specifies how they

are to be contacted by providing a profile: "*[t]he probability 300 is generated in one embodiment*

by considering a profile of prior knowledge 302...profile 302 includes a user profile directly

specified by the user..." column 7, lines 16-19.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-15 and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by

Horvitz (US 6618716 B1).

Horvitz teaches the predictive intelligent routing of calls to users using a probability

determination (Figure 7) for receiving alerts from multiple devices and forwarding the alerts to

the determined user device. With respect to the claims below, references to the prior art appear

in parenthesis.

Claims

1.   *A network device* **(Horvitz, Figure 2)**, *comprising:*

a user interface to allow users to specify at least one contact device during a period of

time **(User direct specified profile, column 7, lines 16-21)***;*

a predictor that predicts a probability of contact the user through at least one contact

device **(Attentional Status Module 204 in Figure 2 generates probability, column 7, lines 4-**

26)*;*

a first port to receive calls intended for the user **(Receive Alert 700 in Figure 7)***;*

a second port to send contact signals to at least one contact device, depending upon a

user specification **(Alert User 704 in Figure 7)***;*

a processor **(Notification Decision-Making Module 206 in Figure 6)** *to:*

determine connection information based upon the contact device at which the user

responds to the contact signal **(Previous Alerts History 608)***; and*

transmit the connection information to the predictor to allow the predictor to update its

probability predictions **(Probability in the Attentional Status Module 204 includes the prior**

knowledge from prior connection information including non receptive alerts (i.e. alert

failure), column 7, lines 16-26)*.*

2.   *The network device of claim 1, the device further comprising a memory to*

store probability data **(It is inherent in Horvitz for a memory to store probability data since**

real-time information is used to update the probability distribution (column 8, lines 45-49)

such that the prior probability must be stored and provided to the update determination)*.*

3.   *The network device of claim 1, the user interface further to allow the user*

to select a predictive mode **(User specified profile for the probability determination, column**

7, lines 16-26)*.*

4.   *The network device of claim 1, the contact device selected from the group*

consisting of: pager, cellular phone, landline phone, computer, personal digital

assistant, and mobile computing device **(Contact devices in column 2, lines 62-65)**.

5.   The network device of claim 1, the contact signal further comprising: a

phone call, a fax signal, an instant message, and a video call **(Alerts are the contact signals,**

column 2, lines 62-65).

6.   A method of contacting a user, comprising:

receiving a call for a user at a first device **(Receive Alert 700 in Figure 7)**;

accessing user preferences for contacting the user **(User direct specified profile,**

column 7, lines 16-21);

predicting a probability on contacting the user by at least one contact device based upon

the user preferences and previous successful contacts **(Attentional Status Module 204 in**

Figure 2 generates probability, column 7, lines 4-26);

transmitting a contact signal to the at least one device having the highest probability

(Alert User 704 in Figure 7);

determining the success or failure of the signal **(Previous Alerts History 608)**; *and*

updating probability data used in the predicting **(Probability in the Attentional Status**

Module 204 includes the prior knowledge from prior connection information including

non receptive alerts (i.e. alert failure), column 7, lines 16-26).

7.   The method of claim 6, receiving a call further comprising receiving one of

the group consisting of: a phone call, a fax signal, an instant message and a

video call **(Source of the alerts, column 9, lines 5-13)**.

8.   *The method of claim 6, accessing user preferences further comprising*

accessing an indicator for predictive routing **(User direct specified profile wherein the**

indicator for predictive routing includes the alternative knowledge learned from

observation of user responses to previous alerts, column 7, lines 16-21).

9.   *The method of claim 6, accessing user preferences further comprising*

accessing a list of user preferences for a particular time period **(User direct specified profile,**

column 7, lines 16-21).

10.   *The method of claim 6, accessing user preferences further comprising*

accessing a list of user preferences and an indicator for predictive routing **(User direct**

specified profile wherein the indicator for predictive routing includes the alternative

knowledge learned from observation of user responses to previous alerts, column 7,

lines 16-21).

11.   *The method of claim 6, predicting a probability further comprising*

applying Bayes's Theorem to the contact devices **(Bayesian module, column 8, lines 24-49)**.

12.   *The method of claim 6, transmitting a contact signal further comprising*

transmitting one of the group consisting of: a phone call, a fax signal, an

instant message or a video call **(Alerts are the contact signals, column 2, lines 62-65)**.

13.   *The method of claim 6, determining the success or failure further*

comprising determining at what device the user responds to the signal **(User's response to**

prior alerts would include the devices based on their probabilities, column 7, lines 23-26).

14.   The method of claim 6, updating the probability data further comprising

raising the probability of a device at which the user responds to the call **(Receptive to alerts**

raises the probability of a device, column 7, lines 23-26).

20.   A network device, comprising:

a means for allowing users to specify at least one contact device during a period of time

(User direct specified profile, column 7, lines 16-21)*;*

a means for predicting a probability of contact the user through at least one contact

device **(Attentional Status Module 204 in Figure 2 generates probability, column 7, lines 4-**

26)*;*

a means for receiving calls intended for the user **(Receive Alert 700 in Figure 7)***;*

a means for sending contact signals to at least one contact device, depending upon a

user specification **(Alert User 704 in Figure 7)***;*

a means for **(Notification Decision-Making Module 206 in Figure 6)***:*

determining connection information based upon the contact device at which the user

responds to the contact signal **(Previous Alerts History 608)***; and*

transmitting the connection information to the predictor to allow the predictor to update

its probability predictions **(Probability in the Attentional Status Module 204 includes the**

prior knowledge from prior connection information including non receptive alerts (i.e.

alert failure), column 7, lines 16-26).

21.   *The network device of claim 20, the device further comprising a means for*

storing probability data **(It is inherent in Horvitz for a memory to store probability data**

since real-time information is used to update the probability distribution (column 8, lines

45-49) such that the prior probability must be stored and provided to the update

determination)*.*

22.   *An computer-readable medium containing computer-executable instructions that, when*

executed, cause the computer to:

          receive a call for a user at a first device **(Receive Alert 700 in Figure 7)***;*

           access user preferences for contacting the user **(User direct specified profile, column**

7, lines 16-21)*;*

          predict a probability on contacting the user by at least one contact device based upon

the user preferences and previous successful contacts **(Attentional Status Module 204 in**

Figure 2 generates probability, column 7, lines 4-26)*;*

          transmit a contact signal to the at least one device having the highest probability **(Alert**

User 704 in Figure 7)*;*

          determine the success or failure of the signal **(Previous Alerts History 608)***; and*

          update probability data used in the predicting **(Probability in the Attentional Status**

Module 204 includes the prior knowledge from prior connection information including

non receptive alerts (i.e. alert failure), column 7, lines 16-26)*.*

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 15-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvitz.

Horvitz does not teach the use of a failure threshold or success threshold for updating the probability data. In Horvitz, if the user has been receptive to alerts in the past, this may increase the probability, while if the user has not been receptive to alerts in the past, this may decrease the probability (column 7, lines 23-26). With respect to the failure threshold (claims 15 and 23), it would have been obvious for the system to query the user to change its specified user profile (column 7, lines 16-21), resulting in a best mode of prediction, where the user has not been receptive to alerts in the past such that its probability of contact is at a threshold of zero or near zero. The reason for this is that the currently selected user profile may result in the user being completely unreceptive to alerts, which would have required a change in the user profile.

With respect to the success threshold (claims 16 and 24), it would have been obvious to order a probability for each contact device based upon past successes since Horvitz teaches to increase probability when the user has been receptive to alerts in the past, wherein a single reception constitutes a success threshold.

With respect to sending multiple contact signals to a first set of contact devices, Horvitz teaches that the user may be in different locations (office or offsite location in column 1, lines 56-60). It would have been obvious for the user selected profile to indicate multiple contact devices based on the devices location (a set of devices at the office and a similar set of devices at the offsite location). The motivation for selecting multiple contact devices is that the message may be highly critical (column 13, lines 49-65) and the user may want multiple contact devices

to provide an alert in order to not miss the critical message. The user selected contact devices

are provided in the user profile which is used in the probability of success determination (column

7, lines 16-26).

Claims

15. *The method of claim 6, updating the probability data further comprising:*

determining that a success rate is below a failure threshold after a predetermined period

of time **(Probability is decreased if the user has not been receptive to alerts in the past,**

column 7, lines 23-26); *and*

querying the user to either enter a broadcast system, or choose a best mode of

prediction **(It would have been obvious to query the user to change its user profile to a**

best mode of prediction where the currently selected user profile has resulted in zero or

near zero reception of alerts).

16. *The method of claim 6, updating the probability data further comprising:*

determining that a success rate is above a success threshold **(Probability is increased**

for successful reception of alerts in the past, column 7, lines 23-26); *and*

ordering a probability for each contact device based upon past successes **(It would**

have been obvious to order the contact device based upon past successes since Horvitz

teaches to update the probability based on successful reception or not, wherein the

probability in Horvitz constitutes a plurality of probabilities (column 6, lines 30-58)).

17. *The method of claim 6, transmitting a contact signal further comprising:*

determining a first set of contact devices having a probability of success within a

predetermined range **(Probability data is determined base on user specified profile,**

wherein alerts are sent to the high probability devices of the user, column 7, lines 16-26);
and

sending multiple contact signals to contact devices in the first set in parallel **(It would**
have been obvious to specify a set of devices based on locations such as at an office or
offsite where the message is highly critical and the user wants multiple device alerts so
as to not miss the alert) *; and*

if no success occurs, determining a next set of contact devices having a probability of
success within a next range **(It would have been obvious for a user to specify that if the**
critical alert is unsuccessful at a plurality of devices at an office, the plurality of devices
at an offsite should be tried in order for the user to receive the critical message).

18.   The method of claim 17, the method further comprising repeating the
determining and sending processes until a success occurs **(It would have been obvious to**
keep trying to provide a highly critical message to a user).

19.   The method of claim 17, the method further comprising altering the ranges
depending upon successes **(Horvitz teaches to update the probability based on success or**
failure, column 7, lines 23-26).

23.   The medium of claim 22, the code causing the machine to update the probability data
further causing the machine to:

determine that a success rate is below a failure threshold after a predetermined period of
time **(Probability is decreased if the user has not been receptive to alerts in the past,**
column 7, lines 23-26); *and*

query the user to either enter a broadcast system, or choose a best mode of prediction **(It would have been obvious to query the user to change its user profile to a best mode of prediction where the currently selected user profile has resulted in zero or near zero reception of alerts)**.

24.   *The medium of claim 22, the code causing the machine to update the probability data further causing the machine to:*

determining that a success rate is above a success threshold **(Probability is increased for successful reception of alerts in the past, column 7, lines 23-26)***; and*

ordering a probability for each contact device based upon past successes **(It would have been obvious to order the contact device based upon past successes since Horvitz teaches to update the probability based on successful reception or not, wherein the probability in Horvitz constitutes a plurality of probabilities (column 6, lines 30-58))**.

25.   *The medium of claim 22, the code causing the machine to update the probability data further causing the machine to transmit a contact signal further comprising:*

determine a first set of contact devices having a probability of success within a predetermined range **(Probability data is determined base on user specified profile, wherein alerts are sent to the high probability devices of the user, column 7, lines 16-26)***;*

send multiple contact signals to contact devices in the first set in parallel **(It would have been obvious to specify a set of devices based on locations such as at an office or offsite where the message is highly critical and the user wants multiple device alerts so as to not miss the alert)***; and*

if no success occurs, determine a next set of contact devices having a probability of

success within a next range **(It would have been obvious for a user to specify that if the**

critical alert is unsuccessful at a plurality of devices at an office, the plurality of devices

at an offsite should be tried in order for the user to receive the critical message).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as

set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date

of this final action.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Melvin Marcelo whose telephone number is 571-272-3125. The examiner

can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melvin Marcelo/
Primary Examiner
Art Unit 2616

June 21, 2008